



**ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AIR QUALITY MINOR PERMIT**

Permit No. **AQ0191MSS01**

Date: **March 23, 2005**

**BARROW UTILITIES AND ELECTRIC COOPERATIVE, INCORPORATED
BARROW POWER PLANT**

The Department of Environmental Conservation, under the authority of AS 46.03, AS 46.14, and 18 AAC 50.502, issues an Air Quality Minor Permit to:

Stationary Source: Barrow Power Plant

Project: Change monitoring, recordkeeping, and reporting for Source ID 9

Permittee: Barrow Utilities and Electric Cooperative, Inc. (BUECI)
P.O. Box 449
Barrow, Alaska 99723-0449

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1. Air Quality Construction Permit number 9873-AC015, condition 29(1)(a), requiring particulate matter source testing for Source ID 9 (217 kW John Deere emergency back-up generator) is repealed.

[18 AAC 50.508(6), 10/1/2004]

2. The Permittee shall not cause or allow particulate matter emitted from Source ID 9 to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.
 - a. Monitor, record, and report according to Reference Method 9 as described in Section 13 of Air Quality Operating Permit 191TVP01, Revision 1.

[18 AAC 50.055(b)(1), 1/18/97; 18 AAC 50.508(6) and 18 AAC 50.544(i), 10/1/2004]

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John F. Kuterbach, Manager
Air Permits Program

Date

**Alaska Department of Environmental Conservation
Air Permits Program**

March 23, 2005

**Barrow Utilities and Electric Cooperative, Inc.
Barrow Power Plant**

**Technical Assessment Report
for Minor Permit No. AQ0191MSS01**

Prepared by Katherine Stringham

Introduction and Findings:

Barrow Utilities and Electric Cooperative, Incorporated (BUECI), operates a power plant facility located on 1295 Agvik Street in Barrow, Alaska, the northernmost community in the United States (Sections 5 and 6, Township 22 North, Range 18 West, Umiat Meridian). The Barrow Power Plant generates and distributes electric power, operates the water treatment plants, and distributes piped natural gas for home heating in the surrounding community. Barrow is not linked to any regional electric power grid, so the city must rely upon the electric power and heat generated from BUECI. Under SIC code 4911, this facility is classified as an electrical services facility. Federal Prevention of Significant Deterioration (PSD) and Alaska air quality regulations designate the area adjacent to the Barrow Power Plant as Class II. The nearest Class I area is the Denali National Park, located approximately 525 miles south-southeast of Barrow.

The Department is repealing particulate matter source testing for Source ID 9 (217 kW John Deere emergency back-up generator) required by construction permit 9873-AC015. Source testing is replaced with Reference Method 9 visual emission monitoring, recordkeeping and reporting under Section 13 of the Title V permit. The change is accomplished by a minor permit under 18 AAC 50.508(6), and the change is incorporated in the significant revision to Air Operating Permit No. 191TVP01.

The source testing requirement is removed due to limited operations of the John Deere engine (approximately 10 hours in 8 years), the small engine size and difficulty and cost of emission testing. Furthermore, the construction permit exceeded its authority for demonstration in that the engine was not a new unit or modified unit at the time the construction permit was prepared. Therefore, the applicant was not obligated to demonstrate compliance with state emission standards as set out in 18 AAC 50.315(e)(1) effective at the time that decision was rendered.